

**UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OHIO
EASTERN DIVISION**

**IN RE NATIONAL PRESCRIPTION
OPIATE LITIGATION**

This document relates to:

Track Three Cases

**MDL No. 2804
Case No. 17-md-2804
Judge Dan Aaron Polster**

**DECLARATION OF STEVEN N. HERMAN IN SUPPORT OF THE PHARMACY
DEFENDANTS' MOTION TO EXCLUDE CERTAIN OPINIONS
AND TESTIMONY OF DR. KATHERINE KEYES**

EXHIBIT 5

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OHIO
EASTERN DIVISION

MDL NO. 2804

CASE NO. 17-md-2804

Hon. Dan A. Polster

IN RE: NATIONAL PRESCRIPTION OPIATE LITIGATION

THIS DOCUMENT RELATES TO:

TRACK THREE CASES

REMOTE VIDEO DEPOSITION OF KATHERINE KEYES, PH.D.

June 3, 2021

REPORTED BY: Laura H. Nichols
Certified Realtime Reporter,
Registered Professional
Reporter and Notary Public

1 I, Laura H. Nichols, a Certified
2 Realtime Reporter and Registered Professional
3 Reporter of Birmingham, Alabama, and a Notary
4 Public for the State of Alabama at Large, acting as
5 Commissioner, certify that on this date, as
6 provided by the Federal Rules of Civil Procedure of
7 the United States District Court, and the foregoing
8 stipulation of counsel, there came before me
9 remotely via Zoom, on June 3, 2021, commencing at
10 11:09 a.m. EDT, KATHERINE KEYES, PH.D., witness in
11 the above cause, for oral examination, whereupon
12 the following proceedings were had:

13
14 * * *

15 THE VIDEOGRAPHER: Good morning. We
16 are going on the record at 11:09 a.m., EST, on June
17 3rd, 2021.

18 When you are not speaking, please
19 mute your audio input as your microphone is
20 sensitive and can pick up whispering and background
21 noise. Please turn off all cell phones or place
22 them away from your computer as they can interfere
23 with the deposition audio. Audio and video
24 recording will continue to take place unless all
25 parties agree to go off the record.

1 This is Media Unit 1 of the
2 video-recorded deposition of Dr. Katherine Keyes,
3 taken by counsel for defendant in the matter of In
4 Re: National Prescription Opiate Litigation Track
5 3 Cases, filed in the United States District Court
6 for the Northern District of Ohio, Eastern
7 Division. Case Number 17-MD-804.

8 This deposition is being held via
9 videoconference with the witness located in New
10 York. My name is Stephen Kent from the firm
11 Veritext Legal Solutions, and I am the
12 videographer. The court reporter is Laura Nichols,
13 also from Veritext Legal Solutions.

14 I am not authorized to administer an
15 oath. I am not related to any party in this
16 action, nor am I financially interested in the
17 outcome. All appearances will be noted on the
18 stenographic record.

19 Will the court reporter please swear
20 in the witness.

21
22 KATHERINE KEYES, PH.D.,
23 having been first duly sworn, was examined and
24 testified as follows:
25

1 Q. If you need to take a break at any
2 time, please just let me know and we can take a
3 break as long as there's not a question pending,
4 okay?

5 A. Yes.

6 Q. Did you do anything to prepare for
7 your deposition today?

8 A. I had meetings with plaintiffs'
9 counsel.

10 Q. About how many meetings did you have
11 with plaintiffs' counsel?

12 A. Two.

13 Q. And how long did those meetings last?

14 A. Approximately two hours each.

15 Q. Have you done the work that you feel
16 you need to do in order to testify here today?

17 A. I believe so.

18 Q. Have you done the work you need to do
19 in order to be able to testify before the jury at
20 trial?

21 A. I believe so.

22 Q. Is there any data that you wanted
23 that you did not have in writing your report?

24 A. No.

25 (Exhibit 1 was marked for

1 identification.)

2 Q. (BY MR. HERMAN:) Let's go ahead and
3 mark Exhibit 1, which will be a copy of your
4 report, dated April 16th, 2021.

5 Exhibit 2, which is the exhibits to
6 your report. And those should be in the sealed
7 envelopes marked CVS 1 and CVS 2.

8 (Exhibit 2 was marked for
9 identification.)

10 Q. (BY MR. HERMAN:) If you want to go
11 ahead.

12 A. Go ahead --

13 Q. Yeah, thank you.

14 (Exhibit 3 was marked for
15 identification.)

16 MR. HERMAN: And we are also going to
17 mark as Exhibit 3 -- and I am not sure -- it won't
18 be there in paper copy, but it is a supplemental
19 materials considered list that was sent to us last
20 night.

21 Q. (BY MR. HERMAN:) Dr. Keyes, have you
22 opened --

23 A. I am opening Exhibit 2.

24 Q. Just let me know when you have them.
25 It is not as easy as when I can hand it across the

1 table.

2 A. The tape is really tight.

3 Q. I did not tape it, but I apologize.

4 A. I have the exhibit.

5 Q. Okay. And is Exhibit 1 a copy of
6 your expert report that you submitted on April
7 16th, 2021?

8 A. Yes.

9 Q. And that is a report you wrote for
10 this case?

11 A. Yes.

12 Q. Do you understand that when you wrote
13 the report, dated it and signed it that it was to
14 include all the opinions that you intend to offer
15 at trial?

16 A. Yes.

17 Q. Does your report contain all the
18 opinions you intend to offer in this case?

19 A. Yes.

20 Q. Do you have any corrections to make
21 to your report at this time?

22 A. I don't at this time.

23 Q. In your report, you cite with end
24 notes a number of materials. And my understanding
25 is those citations are to the materials that

1 materials that you cited as end notes in the
2 report, correct?

3 MR. ARBITBLIT: Objection, vague.

4 A. I would say both the end notes and
5 the materials considered list would be potential
6 sources that informed my opinions.

7 Q. (BY MR. HERMAN:) Okay. Exhibit D is
8 a list of the cases where you -- Exhibit D to
9 Exhibit 2 of this deposition is a list of the cases
10 where you provided testimony. Is that correct?

11 A. Is that in a separate -- I only have
12 through Exhibit C as part of Exhibit 2.

13 Q. Okay. Well, let me just try it this
14 way, then. I don't know why that last two pages is
15 not attached to yours, but -- you testified in a
16 case involving Cuyahoga and Summit County, correct?

17 A. Correct.

18 Q. Okay. And you testified there under
19 oath?

20 A. Yes.

21 Q. And did you have an opportunity to
22 review that transcript after your deposition?

23 A. I did.

24 Q. And you also testified in a case that
25 involved Suffolk County, Nassau County and the

1 State of New York?

2 A. Yes.

3 Q. And you gave a deposition in that
4 case?

5 A. I did.

6 Q. And you also testified at a hearing
7 before Judge Garguilo?

8 A. I did.

9 Q. And your testimony in that case, both
10 at your deposition and at the hearing, were under
11 oath?

12 A. Yes.

13 Q. Did you review your transcripts?

14 A. Yes.

15 Q. And you have also testified at a case
16 involving Cabell County and the City of Huntington,
17 West Virginia; is that correct?

18 A. Yes.

19 Q. And in that case you gave two
20 depositions?

21 A. Yes.

22 Q. And both of those depositions were
23 under oath?

24 A. Yes.

25 Q. And did you have a chance to review

1 your transcript for both those depositions?

2 A. Yes.

3 Q. Going back to your report in this
4 case, your report in this case doesn't mention CVS,
5 Rite Aid, Walgreens, Walmart or Giant Eagle,
6 correct?

7 A. That's correct.

8 Q. You didn't consider any document
9 produced by CVS in this case or any other, correct?

10 A. As far as I know, no document
11 produced by the -- the defendants.

12 Q. Okay. And when you say "the
13 defendants," you are including in that CVS,
14 Walgreens, Walmart, Rite Aid and Giant Eagle?

15 A. Yes.

16 Q. You didn't review any -- the
17 deposition of any CVS employee, correct?

18 A. That's correct.

19 Q. You didn't review the deposition of
20 any Walgreens, Walmart, Rite Aid or Giant Eagle
21 employee, correct?

22 A. That's correct.

23 Q. I searched your report for the words
24 "CVS," "Rite Aid," "Walgreens," "Walmart" and
25 "Giant Eagle," and they don't appear anywhere in

1 your report, correct?

2 A. I include various data sources that
3 provide aggregate information on retail pharmacies
4 across the United States.

5 Q. Any pharmacy, correct, any retail
6 pharmacy?

7 A. On a wide variety of pharmacies.

8 Q. That is true, the word "pharmacy"
9 does appear six times in your report. Does that
10 sound about right?

11 MR. ARBITBLIT: Objection, vague.

12 A. I have not done -- right. I have not
13 done a check on the word "pharmacy," but there is
14 considerable information about pharmacies in the
15 report.

16 Q. (BY MR. HERMAN:) But you don't
17 specifically mention CVS, Rite Aid, Walgreens,
18 Walmart or Giant Eagle in your report, correct?

19 A. That is correct.

20 Q. You don't intend to offer any
21 opinions specific to CVS, correct?

22 A. To the extent that I offer opinions
23 about pharmacies, I would include CVS as one of
24 them. But I don't have any specific opinions about
25 CVS uniquely.

1 Q. Well, I think we are saying the same
2 thing. You are not going to offer opinions
3 specific to CVS in this case, correct?

4 MR. ARBITBLIT: Objection. Asked and
5 answered.

6 A. I offer opinions about the pharmacies
7 overall. There is nothing that is specific to any
8 particular pharmacy chain.

9 Q. (BY MR. HERMAN:) And just so the
10 record is clear, when you say "specific to any
11 pharmacy chain," you are including in that
12 Walgreens, Walmart, Rite Aid and Giant Eagle?

13 A. That's correct.

14 Q. Professor Keyes, this may be a
15 somewhat silly question, but have you ever worked
16 in a pharmacy?

17 A. I have never worked in a pharmacy.

18 Q. You don't hold yourself out as an
19 expert in the practice of pharmacy?

20 A. I have expertise in the epidemiology
21 of pharmacological distribution and harms
22 associated with medications that are dispensed from
23 pharmacies.

24 Q. Okay. But you yourself have never
25 practiced pharmacy?

1 that I do not believe it would have occurred if
2 opioids did not become standard practice, because
3 it led to this oversupply.

4 Q. (BY MR. HERMAN:) But do you believe
5 that the prescribing of opioids for the treatment
6 of pain as standard practice led to the oversupply
7 of prescription opioids?

8 MR. ARBITBLIT: Object to form.

9 A. It was one of the factors that led to
10 oversupply.

11 Q. (BY MR. HERMAN:) Okay. And going
12 back to Exhibit 6, CVS 5 for you, the article says,
13 "The second, related force involved the
14 pharmaceutical industry's concerted effort to
15 advocate for long-term use of opioids as a safe,
16 nonaddictive, effective, and humane alternative to
17 treat noncancer pain. These marketing efforts
18 accelerated the shift in treatment approaches for
19 chronic noncancer pain."

20 Did I read that correctly?

21 A. Yes.

22 Q. Okay. And the example you go on to
23 give in the next few sentences is about Purdue,
24 right?

25 A. Yes.

1 Q. Purdue is a manufacturer, correct?

2 A. That's correct.

3 Q. When you refer to the pharmaceutical
4 industry in this sentence, were you referring to
5 Purdue and other manufacturers?

6 A. I believe several sentences later I
7 define the pharmaceutical industry as including the
8 production, distribution and prescription of
9 opioids proliferated due to the removal of
10 physician sanctions. So the pharmaceutical
11 industry is broadly conceived.

12 Q. Okay. What is your basis for saying
13 that the marketing efforts that accelerated the
14 shift in treatment approaches for chronic noncancer
15 pain was caused by entities other than
16 manufacturers?

17 A. Can you point me to where you are
18 looking?

19 Q. The second force -- so it's at the
20 top of the paragraph, the second force --

21 A. Uh-huh.

22 Q. -- "involved the pharmaceutical
23 industry's concerted efforts to advocate for the
24 long-term use of opioids as safe, nonaddictive,
25 effective, and humane alternative to treat

1 noncancer pain. These marketing efforts
2 accelerated the shift in treatment approaches for
3 chronic noncancer pain."

4 A. Yes, that is what it says.

5 Q. Okay. And -- well -- okay. Well,
6 the only example you give is Purdue, a
7 manufacturer. So I am wondering, what basis do you
8 have to say that other -- any part of the
9 pharmaceutical industry other than manufacturers
10 engaged in marketing efforts that accelerated the
11 shift in treatment approaches for chronic noncancer
12 pain?

13 MR. ARBITBLIT: Object to form.

14 Misstates.

15 A. I guess I am still not understanding
16 the question. The --

17 Q. (BY MR. HERMAN:) Well --

18 A. I say in here that there were
19 "concerted efforts to advocate for the long-term
20 use of opioids as" -- and that those concerted
21 efforts involved the pharmaceutical industry.
22 Several sentences later, I provide context for that
23 statement, saying that -- that the Intractable Pain
24 Act "removed physician sanctions for the use of
25 opioids" and that "the production, distribution,

1 prescription, and use of opioids proliferated."

2 So all entities that would be
3 involved in the production, distribution,
4 prescription and use of opioids would be implicated
5 in that statement.

6 Q. Okay. Well, your report discusses --
7 and going back to Exhibit 1, your report discusses
8 how direct marketing to physicians increased
9 prescribing, correct?

10 MR. ARBITBLIT: Objection. Vague.

11 A. So that section in the report
12 describes three papers that have used data on
13 payments to physicians and associations with
14 various outcomes.

15 Q. (BY MR. HERMAN:) Okay. And on Page
16 14, I think that is where you are talking about,
17 you are discussing how direct marketing to
18 physicians increased prescribing, right, and you
19 cite -- I think you just said three papers for that
20 proposition?

21 A. I am -- I am on Page 14 of the
22 report, but I think it is actually later in the
23 report, just so it is accurate in the record.

24 Q. So you talk about it at Page 14 and
25 then again at Page 33?

1 A. Oh, I see. The marketing -- I state
2 in the -- in the report that the "marketing of
3 opioid drugs led to increased sales of the marketed
4 drugs."

5 Q. Well, you say on Page 14,
6 "Evidence" -- "The increase in opioid prescribing
7 was driven by a multitude of factors, including
8 direct marketing to physicians using data that
9 underestimated opioid use disorder risks in
10 patients, which I detail in Section B. Evidence
11 shows that pharmaceutical marketing of prescription
12 drugs increases prescribers' likelihood of
13 prescribing the marketed drug in the future,"
14 right?

15 A. That is a general statement about
16 prescription drugs and marketing. The next
17 sentence is about opioids.

18 Q. Yeah. "That is also true for
19 prescription opioids; as a result, increased
20 marketing of opioids led to increased sales of the
21 marketed drugs," right? And you cite a couple of
22 studies?

23 A. Correct.

24 Q. The literature that you cite about
25 marketing discusses marketing activities by

1 pharmaceutical manufacturers to physicians,
2 correct?

3 A. Is there a specific study that you
4 are referring to?

5 Q. I am asking about all of them at the
6 moment. The literature that you cite in your
7 report about marketing activities to physicians
8 discusses marketing activities by manufacturers to
9 physicians, correct?

10 A. Are the articles in the exhibits,
11 because I would just like to confirm that that is
12 what the articles state?

13 Q. You don't know off the top of your
14 head whether the articles are discussing marketing
15 activities that pharmaceutical manufacturers engage
16 in?

17 A. There -- the articles refer to a
18 database called the Sunshine Open Payments
19 database, I believe, and I would like to -- I would
20 feel more comfortable giving correct testimony if I
21 could look at the article and make sure that I am
22 describing what is included in the contents of the
23 Open Payments database accurately.

24 Q. Okay. Well, why don't we look at --
25 why don't we try 7 -- did you tell me you already

1 opened 7-12?

2 A. I did open 7-12, yes.

3 MR. HERMAN: Why don't we mark it --
4 mark that as Exhibit 8.

5 (Exhibit 8 was marked for
6 identification.)

7 MR. HERMAN: And --

8 THE VIDEOGRAPHER: Counsel, your
9 screen sharing is in the video.

10 MR. HERMAN: When -- I am sorry. The
11 screen sharing is in the video. Can you see me?

12 THE VIDEOGRAPHER: No, the screen --
13 the screen being shared is in the video. I was
14 just letting him know, whoever was sharing.

15 MR. HERMAN: Oh.

16 Q. (BY MR. HERMAN:) Exhibit 8 is an
17 article titled, "Association of Industry Payments
18 to Physicians with the Prescribing of Brand-name
19 Statins in Massachusetts."

20 A. Yes, that is correct.

21 Q. Okay. And do you see on Page 763 --
22 well, let me ask you this: This is one of the
23 articles you cite in your report, correct?

24 A. Yes, but I don't think it is on -- I
25 don't cite this on Page 14. I believe I cite this

1 in the other section that discusses the Hadland
2 article. So if I could just pull up that section
3 to make sure I am -- is that correct? To make
4 sure -- do you know which number --

5 Q. It -- I believe this is Reference
6 141, so maybe it is --

7 A. Yeah.

8 Q. You cite some of them in both places,
9 but I think this is one cite on Page --

10 A. This is only -- I just wanted to pull
11 up the correct section. Okay.

12 Q. Okay. Do you see on Page 763, it
13 says, "Payment by pharmaceutical manufacturers to
14 physicians outside the research context may be
15 problematic, because they can be perceived as
16 conflicts of interest that could interfere with
17 physicians' responsibilities to their patients"?

18 A. This is on Page 763?

19 Q. Yep, first paragraph.

20 A. Oh, I see. Yes. I see that.

21 Q. You see above it says, "In the United
22 States" -- the paragraph begins, "In the United
23 States, many physicians have financial
24 relationships with pharmaceutical manufacturers."

25 A. I see that.

1 Q. Okay. Did I read that correctly?

2 A. You did.

3 Q. Is it your understanding that this
4 article about payments to physicians relates to
5 manufacturers?

6 A. That this particular article about
7 statins? You are asking -- you are asking
8 whether --

9 Q. Well, I am asking -- this is -- you
10 said you would like to see an article. I am --
11 I -- well, I am asking you, does this article deal
12 with payment by manufacturers?

13 A. This article does -- the methods
14 section of this paper says that they used two data
15 sources. This -- the data source that was used on
16 payments was the Massachusetts physician Open
17 Payments database, which is derived from
18 pharmaceutical manufacturer reports. But the
19 article does not include opioids, as far as I can
20 tell.

21 Q. Okay. I -- well, we are short on
22 time. I'm not sure I am going to be able to go
23 through every article.

24 But sitting here today, do you
25 believe that the literature you cite in your report

1 about marketing to physicians discusses marketing
2 activities by pharmaceutical manufacturers?

3 MR. ARBITBLIT: Object to form.

4 A. I cite a variety of studies. If
5 there's a specific study that you are asking about,
6 I can look at the study and see what was included.

7 Q. (BY MR. HERMAN:) All right. Let's
8 look at 72-26. Oh, I'm sorry. This is 7-2. we
9 will mark that as Exhibit 9.

10 (Exhibit 9 was marked for
11 identification.)

12 A. So it is 7-26?

13 Q. (BY MR. HERMAN:) Well, 7-2, I'm
14 sorry, and it is Reference 26 in your --

15 A. Okay. 7- --

16 Q. -- report. And this is an article
17 entitled, "Association of Pharmaceutical Industry
18 Marketing of Opioid Products to Physicians With
19 Subsequent Opioid Prescribing." Is that correct?

20 A. That is correct.

21 Q. And this is one of the papers you
22 cite in your report at both Page 14 and Page 33?

23 A. Yes.

24 Q. Okay. And this looked at the Open
25 Payments database that you were asking about?

1 A. Yes.

2 Q. And the authors obtained information
3 from the Open Payments database on all transfer of
4 value from pharmaceutical companies to physicians
5 during 2014, right?

6 A. That's correct.

7 Q. Okay. And if you would look at Page
8 862, the "Results" column, do you see where it
9 says, "The three companies with the highest payment
10 totals were INSYS Therapeutics (which manufactures
11 Subsys, the fentanyl sublingual spray), Teva
12 Pharmaceuticals USA, and Janssen Pharmaceuticals"?

13 A. I see that.

14 Q. Okay. And do you understand that
15 INSYS, Teva and Janssen are all manufacturers?

16 A. I do understand that.

17 Q. And if you turn to Page 863, do you
18 see the first full paragraph, where it says, "Our
19 findings add to prior studies of industry marketing
20 to physicians by examining" -- oh, sorry. Strike
21 that.

22 Do you see the last paragraph? After
23 the introductory clause, it says, "our findings
24 suggest that manufacturers should consider a
25 voluntary decrease or complete cessation of

1 marketing to physicians"?

2 MR. ARBITBLIT: Object to reading a
3 partial sentence.

4 MR. HERMAN: Okay. I will read the
5 full sentence.

6 Q. (BY MR. HERMAN:) "Amidst national
7 efforts to curb the overprescribing of opioids, our
8 findings suggest that manufacturers should consider
9 a voluntary decrease or complete cessation of
10 marketing to physicians." Did I read that
11 correctly?

12 A. You did.

13 Q. Okay. And is it your understanding
14 that this article relates to marketing by
15 manufacturers?

16 A. My understanding is that the data
17 source as described in the Methods section says
18 "pharmaceutical companies."

19 Q. Well, do you have an understanding --

20 A. The three top companies that you
21 cited were three opioid manufacturers, but I have
22 not looked into the Open Payments database in
23 enough detail to know that every company included
24 in the Open -- Open Payments database is a
25 manufacturer.

1 Q. Sorry. So you don't know -- I mean,
2 the recommendation certainly is about
3 manufacturers, correct?

4 A. In -- in the Discussion section, it
5 says there's a national effort to curb
6 overprescribing and that one way to do that would
7 be to suggest manufacturers cease marketing to
8 physicians.

9 Q. Okay.

10 A. It does not preclude other efforts.

11 Q. Tell me everything you know about
12 marketing by pharmacies.

13 MR. ARBITBLIT: Object to form.
14 Vague. Overbroad.

15 A. Everything I know about -- if there's
16 a specific document that you would like me to
17 review, I can -- I can do that. Otherwise, I would
18 prefer to stick to what is in my report.

19 Q. (BY MR. HERMAN:) Okay.

20 A. In terms of my general knowledge
21 about marketing by pharmacies, pharmacies market
22 all kinds of products.

23 Q. Do you know if any of these studies
24 apply to pharmacies?

25 MR. ARBITBLIT: Objection. Vague.

1 A. I believe what I have testified is
2 that what is written in the Methods section of this
3 Hadland article is that the Open Payments database
4 includes information from pharmaceutical companies.
5 And I have not looked at every company that is in
6 the Open Payments database. And that's as much
7 information as I can -- I can give.

8 Q. (BY MR. HERMAN:) Sitting here today,
9 do you know if any of the opinions you are giving
10 about marketing are applicable to pharmacies?

11 MR. ARBITBLIT: Objection. Vague.
12 Overbroad.

13 A. I think all of the opinions that I
14 have given are applicable to all -- they are --
15 they are -- they are -- the opinions are what they
16 are. And they are applicable -- for example, I say
17 that there is overprescribing and oversupply. I
18 think that certainly applies to pharmacies.

19 Q. (BY MR. HERMAN:) Okay. Sticking to
20 marketing, I asked specifically about whether your
21 opinions -- whether any of these studies about
22 marketing relate to pharmacies.

23 MR. ARBITBLIT: Objection. Vague,
24 interrupted the witness and misstates the prior
25 question.

1 A. I think what I have written here is
2 the amount of information that I have, which is
3 that these articles apply to pharmaceutical company
4 marketing. And I would have to look at the extent
5 to which -- I don't know what companies are -- the
6 totality of companies that are included in the Open
7 Payments database.

8 Q. (BY MR. HERMAN:) So in the course of
9 your work, you haven't analyzed the materials in
10 your report to determine who is marketing? That is
11 your testimony?

12 MR. ARBITBLIT: Object to the form.
13 Argumentative.

14 A. Determine who is marketing? I don't
15 know what you mean by "who is marketing."

16 Q. (BY MR. HERMAN:) Well, in the course
17 of your work, you are offering opinions about
18 marketing. In this report, you haven't analyzed
19 the materials that you cite in your report to
20 determine who is engaged in marketing?

21 MR. ARBITBLIT: Object to form.
22 Vague. Overbroad.

23 Q. (BY MR. HERMAN:) True or false?

24 A. I have reviewed the epidemiological
25 evidence and reported it in this report to the best

1 of my ability. And what I reported is that
2 pharmaceutical companies are in the Open Payments
3 database.

4 Q. But you don't know what
5 "pharmaceutical companies" actually refers to, and
6 you would agree with me that this article only
7 discusses manufacturers, correct?

8 MR. ARBITBLIT: Objection. Compound.

9 A. What I can testify is that, in the
10 Results section of this paper, three companies are
11 mentioned, and those three companies are
12 manufacturers.

13 Q. (BY MR. HERMAN:) And in the
14 recommendation that the study makes at the end, it
15 only mentions manufacturers, correct?

16 MR. ARBITBLIT: Objection. Misstates
17 the record.

18 A. No, that is not correct. The
19 sentence says that there are national efforts to
20 curb overprescribing, which is not specific to
21 manufacturers. And the second part of the sentence
22 suggests that manufacturers curb marketing to
23 physicians.

24 Q. (BY MR. HERMAN:) In an article about
25 marketing to physicians, their "findings suggest

1 that manufacturers should consider a voluntary
2 decrease or complete cessation of marketing to
3 physicians." You don't agree that is only about
4 manufacturers?

5 MR. ARBITBLIT: Object to form.
6 Argumentative. Misstates the record.

7 A. I think I would consider the whole
8 sentence together, which starts, "Amid national
9 efforts to curb the overprescribing of opioids."
10 And I think that that is a more general statement.

11 Q. (BY MR. HERMAN:) Okay. You don't --
12 you don't agree with me that this article that
13 cites manufacturers, three manufacturers as the
14 largest payors and then makes a recommendation only
15 as to manufacturers is about manufacturers?

16 MR. ARBITBLIT: Objection. Asked and
17 answered. Compound. Argumentative.

18 A. I think that is a narrow
19 interpretation of the data.

20 Q. (BY MR. HERMAN:) Okay. You actually
21 don't know, as you previously testified, what the
22 data in the Open Source Payment reflects, correct?

23 MR. ARBITBLIT: Objection. Asked and
24 answered.

25 A. I have -- sorry. I have not reviewed

1 every company that is in the Open Payments
2 database.

3 Q. (BY MR. HERMAN:) Have you reviewed
4 any companies?

5 A. I have reviewed the epidemiological
6 literature, of which this article is one of
7 several, and reported its results faithfully.

8 Q. Okay. So you made no effort to
9 identify who was responsible for the marketing of
10 opioids?

11 MR. ARBITBLIT: Object to form.
12 Misstates the record. Argumentative.

13 A. The effort that I made was to review
14 the evidence and report it, and that is what I have
15 done in my report.

16 Q. (BY MR. HERMAN:) Well, tell me
17 everything you know about pharmacies' marketing of
18 prescription opioids.

19 MR. ARBITBLIT: Objection.
20 Previously asked. Argumentative. Overbroad.
21 Vague.

22 A. In my report, I discuss various
23 marketing efforts, as they have been reported in
24 the epidemiological literature. I'm not offering
25 opinions about specific companies' marketing, as I

1 note in the report.

2 Q. (BY MR. HERMAN:) You don't know --
3 you don't know which companies engaged in which
4 activities, if any at all, correct?

5 MR. ARBITBLIT: Objection. Vague.

6 A. I am not offering -- I -- in terms of
7 what is reported in these articles, there are
8 specific companies mentioned. And so to the extent
9 that specific companies are mentioned in the
10 epidemiological literature, that is what I feel
11 like I have the expertise to report on.

12 But I am not offering opinions about
13 specific pharmacy marketing.

14 Q. (BY MR. HERMAN:) All those companies
15 that are specifically mentioned are manufacturers,
16 correct?

17 A. The three companies mentioned in
18 Hadland's 2018 are manufacturers.

19 Q. I meant -- I am -- I am talking in
20 any article. Like we just looked at one where you
21 discussed Purdue, correct? That is a manufacturer.

22 MR. ARBITBLIT: Object to form.
23 Compound. Vague.

24 A. I would not offer testimony about
25 every article. I can speak to each article at the

1 time.

2 Q. (BY MR. HERMAN:) Did you review
3 those articles carefully before using them in your
4 report?

5 A. I did.

6 Q. Do you recall any mention of
7 marketing by pharmacies?

8 MR. ARBITBLIT: Object to form.

9 A. I would need to review each article
10 again.

11 Q. (BY MR. HERMAN:) Okay. So sitting
12 here today, you don't know what companies engaged
13 in marketing activity?

14 MR. ARBITBLIT: Object to form.

15 A. Sitting here today, I can report on
16 the companies that are specifically mentioned in
17 these articles.

18 Q. (BY MR. HERMAN:) And those are all
19 manufacturers?

20 MR. ARBITBLIT: Object to form.

21 Asked and answered. Overbroad.

22 A. The company -- the three companies
23 that I mentioned in Hadland 2018 are manufacturers.
24 And we can look at the other Hadland articles to go
25 through the companies that are mentioned in those

1 as well.

2 Q. (BY MR. HERMAN:) And the marketing
3 activities that -- the studies you are looking at
4 are marketing to prescribers, correct?

5 A. They are marketing to physicians.

6 Q. Okay. And when you are talking about
7 factors that led to increased prescribing, you are
8 speaking about the general population of
9 prescribers, not specific prescribers, correct?

10 A. There is information on specific
11 types of prescribers in various articles, but there
12 was an overall increase in opioid prescriptions
13 across many different types of prescribers, I
14 guess. If that -- if I am -- I might be
15 misunderstanding the question, so I am sorry if I
16 am.

17 Q. I will try to do it a little
18 differently.

19 You don't know what caused a
20 particular prescriber to write a particular
21 prescription, correct?

22 MR. ARBITBLIT: Object to form.

23 A. I have not evaluated particular
24 prescribers.

25 Q. (BY MR. HERMAN:) Okay. You don't

1 know a particular prescriber's knowledge about the
2 potential risks of prescription opioids, correct?

3 MR. ARBITBLIT: Object to form.

4 A. I can -- I can speak in generalities
5 about what the epidemiological literature says
6 about prescribers, but I have not evaluated any
7 singular prescriber.

8 Q. (BY MR. HERMAN:) You don't know
9 whether a particular prescriber saw marketing
10 materials, correct?

11 A. I don't have any -- I don't have any
12 expertise on particular prescriber, so I do not
13 know whether they saw marketing materials.

14 Q. Okay. And I think you have already
15 answered this, but you don't know what, if any,
16 marketing materials doctors who prescribed opioids
17 in Trumbull and Lake Counties saw, correct?

18 A. That's correct.

19 Q. Okay. Can I ask you to turn to Page
20 40 of your report? And can you see at the end of
21 the first full paragraph where there's a reference
22 to "'aggressive and highly'" -- it is a quote,
23 "'aggressive and highly effective marketing tactics
24 on the part of the pharmaceutical industry
25 (manufacturers, distributors and pharmacies)'"?

1 A. Yes, I see that.

2 Q. And you cite to Reference 190 and
3 specifically Section 719 for that proposition.

4 A. Yes.

5 Q. Okay.

6 (Exhibit 10 was marked for
7 identification.)

8 MR. HERMAN: Can -- Jason, can we
9 pull up -- what exhibit are we on, 9?

10 MR. ACTON: Yeah.

11 Q. (BY MR. HERMAN:) Can I ask you to
12 open Exhibit -- CVS Exhibit 6, Professor Keyes?
13 And Exhibit 9 [sic] is a document called "High and
14 Rising Mortality Rates Among Working-Aged Adults."
15 And is that what you referenced as Reference 190 in
16 your report?

17 A. It is.

18 Q. Okay. And if I could ask you to turn
19 to 7-19. And do you see where you pulled that
20 quote from, there's a citation in support of it to
21 an article by Kolodny, et al., 2015?

22 A. Page 7-19.

23 Q. Do you see at the top it says --

24 A. Oh, I was looking in the wrong
25 section.

1 Q. Quoted at the top, "Aggressive and
2 highly effective marketing tactics on the part of
3 pharmaceutical industry (manufacturers,
4 distributors, pharmacies)." And there's a citation
5 to Kolodny et al. --

6 A. Yes.

7 Q. -- in support of that. Okay.

8 MR. HERMAN: Can I ask you, Jason, to
9 pull up Exhibit 10 -- well, it's going to be
10 Exhibit 10 --

11 MR. ACTON: 11.

12 Q. (BY MR. HERMAN:) Oh, Exhibit 11.
13 And, Professor Keyes, can I ask you to open
14 Exhibit -- CVS Exhibit 8?

15 A. I'm sorry. I -- the Kolodny article
16 is citing actions of the legal and illegal drug
17 suppliers and regulatory failures of government
18 agencies.

19 Q. Well, I believe, though, it is also
20 the only citation in support of "aggressive and
21 highly effective marketing tactics on the part of
22 the pharmaceutical industry (manufacturers,
23 distributors, and pharmacies)"?

24 A. Oh, I see. In the second paragraph.

25 Q. Yeah. Okay.

1 A. Okay.

2 MR. HERMAN: Can we pull up that
3 Kolodny article, if you could open CVS 8? And that
4 is going to be Exhibit 11.

5 (Exhibit 11 was marked for
6 identification.)

7 A. CVS 7-8 or CVS 8?

8 Q. (BY MR. HERMAN:) CVS 8.

9 A. Okay.

10 Q. Okay. And CVS 8 is an article
11 entitled "The Prescription Opioid and Heroin
12 Crisis: A Public Health Approach to an Epidemic of
13 Addiction," and the authors are Andrew Kolodny,
14 David T. Courtwright, Katherine Hwang, Peter
15 Kreiner, John L. Eadie, Thomas W. Clark, and G.
16 Caleb Alexander, and this was an article published
17 January 12th, 2015; is that correct?

18 A. Yes.

19 Q. Okay. Are you aware that Professor
20 Alexander has been retained by and identified as an
21 expert witness by plaintiffs in this opioid
22 litigation?

23 MR. ARBITBLIT: Object to form.
24 Vague as to time.

25 A. Could you specify what you mean by

1 "this opioid litigation"?

2 Q. (BY MR. HERMAN:) Well, in the case
3 that you are here testifying in today, the Trumbull
4 and Lake County case.

5 MR. ARBITBLIT: Same objection.

6 A. I have -- I have been vaguely aware
7 that Dr. Alexander has been -- I think I have
8 supplied him with some estimates. And that is my
9 knowledge of his involvement.

10 Q. (BY MR. HERMAN:) Okay. So as part
11 of your work with the plaintiffs, you have provided
12 Dr. Alexander estimates?

13 A. Yes.

14 Q. Okay. Are you aware that Professors
15 Courtwright and Kolodny have been retained by and
16 identified as expert witnesses by plaintiffs in
17 other opioid litigation cases?

18 MR. ARBITBLIT: Same objection.
19 Vague as to time. Misleading.

20 A. I have seen Dr. Kolodny's name in
21 other litigation, and I don't recall seeing
22 Dr. Courtwright.

23 Q. (BY MR. HERMAN:) Okay. Okay. And
24 if I direct your attention to, "In addition to
25 minimizing risks of OPRs, the campaign" -- well, I

1 direct your attention to 562, the bottom of the
2 page. Do you see where it says, "In addition to
3 minimizing the risks of OPRs, the campaign advanced
4 by opioid manufacturers and pain organizations
5 exaggerated the benefits of long-term opioid use"?
6 Do you see that?

7 A. "In" -- yeah, "the campaign advanced
8 by opioid manufacturers and pain organizations" --
9 yes, I see it.

10 Q. Okay. And that only discusses opioid
11 manufacturers, correct?

12 MR. ARBITBLIT: Object to form.
13 Misstates.

14 A. That sentence refers to "opioid
15 manufacturers and pain organizations."

16 Q. (BY MR. HERMAN:) Well, okay. Does
17 it discuss pharmacies?

18 A. That particular sentence or the
19 article?

20 Q. Well, before quoting "High and Rising
21 Mortality Rates Among Working-Age Adults" about
22 aggressive and effective -- or marketing by
23 manufacturers, distributors and pharmacies, did you
24 look to see whether it or the article it cited
25 provided any support for the idea that pharmacies

1 engaged in, quote/unquote, aggressive and effective
2 marketing of prescription opioids?

3 MR. ARBITBLIT: Object to form.
4 Argumentative.

5 A. Yes.

6 Q. (BY MR. HERMAN:) Okay. Tell me what
7 in either of those discusses marketing by
8 pharmacies.

9 MR. ARBITBLIT: Object to form.

10 A. In that sentence or the whole
11 article?

12 Q. (BY MR. HERMAN:) Well, you said you
13 checked. So if you could point me to where there's
14 discussion of marketing by pharmacies, I would ask
15 that you do so.

16 MR. ARBITBLIT: Object to form.
17 Argumentative.

18 A. I'm not sure where -- I can read the
19 article again.

20 Q. (BY MR. HERMAN:) Well, tell me
21 everything -- I have asked you a couple of times
22 now. I have asked you to tell me everything you
23 know about marketing by pharmacies from this
24 article or otherwise, and I haven't gotten a
25 response.

1 MR. ARBITBLIT: Object to form.

2 Argumentative. Misstates.

3 A. Yeah, I mean, just glancing over this
4 article, it mentions opioid companies a number of
5 times.

6 Q. (BY MR. HERMAN:) Do you know if
7 those companies are pharmacies?

8 MR. ARBITBLIT: Object to form.
9 Interrupting the witness.

10 A. I don't see specific pharmacies
11 mentioned in this article. But there is discussion
12 of a range of opioid companies, or companies that
13 are involved in the distribution of opioids. And
14 this article, as well as many others, have
15 discussed the distribution of opioids as part of an
16 oversupply problem.

17 Q. (BY MR. HERMAN:) Okay. Where does
18 it discuss marketing -- I mean, you're -- it seems
19 to me that you are changing the question. But
20 where does it discuss marketing by pharmacies to
21 support the idea that pharmacies engaged in
22 aggressive and effective marketing?

23 MR. ARBITBLIT: Object to the form.
24 Argumentative.

25 A. I -- so the sentence that is cited

1 with regard to the National Academies report is
2 broader than just marketing activities. It
3 includes flooding the market with highly addictive,
4 yet deadly substances. And I think that the
5 Kolodny article provides pretty solid evidence of
6 the flooding of the market --

7 Q. (BY MR. HERMAN:) Well, that -- go
8 ahead.

9 A. -- so it is an appropriate citation
10 for that sentence.

11 Q. Well, if you're talking --

12 A. With regard to specific marketing
13 activities, no specific marketing activities are
14 discussed in this article, but a broad range of
15 activities by these companies is discussed in the
16 article. And there's discussion of marketing by
17 various companies.

18 Q. But you would agree with me, I mean
19 the sentence that you quote in your report is, "On
20 the supply side, weak government regulations and
21 aggressive and highly effective marketing tactics
22 on the part of the pharmaceutical industry
23 (manufacturers, distributors, pharmacies)," that
24 neither of these sources provide support for the
25 ideas that pharmacies engaged in aggressive and

1 highly effective marketing?

2 MR. ARBITBLIT: Object to form.

3 A. That -- the citation of the Kolodny
4 article is a -- is a larger sentence. It is -- it
5 is not just the --

6 Q. (BY MR. HERMAN:) Well, but I am
7 asking you about the portion of the sentence that
8 says "aggressive and highly effective marketing."
9 You would agree with me that the Kolodny article
10 does not provide support for the idea that the
11 pharmacies engaged in highly effective and
12 aggressive marketing, correct?

13 A. I would not agree with that broad of
14 a statement.

15 Q. Well, what is your basis that the
16 pharmacies engaged in aggressive and highly
17 effective marketing?

18 A. My testimony is that the Kolodny
19 article describes overall industry marketing and
20 distribution practices that were deceptive and that
21 the pharmacies would be included in that.

22 Q. Well, let's limit it to marketing.
23 We will put aside your editorializing about
24 distribution. But what -- I mean, the marketing
25 example discussed, again, is Purdue. The only

1 campaign advance discussed is by opioid
2 manufacturers and pain organizations. What are you
3 basing your assertion that pharmacies engaged in --
4 that the Kolodny article discusses the fact that
5 pharmacies engaged in any marketing, let alone
6 aggressive and highly effective marketing?

7 MR. ARBITBLIT: Objection. Vague.
8 Argumentative.

9 A. My testimony is the same as the
10 previous question. I think, in citing the Kolodny
11 article, there is discussion of a broad range of
12 activities by companies.

13 Q. (BY MR. HERMAN:) Well, what --

14 A. And that is my -- that is the
15 expertise that I am offering.

16 Q. Okay. But I want to zero in on the
17 marketing aspect. I am only asking you about the
18 activity of marketing.

19 A. Can you define what you mean by
20 "marketing"?

21 Q. Well, what did you mean by it when
22 you used it in your report and you cited this
23 sentence in your report?

24 A. I -- what I meant by "marketing" is
25 activities that increased the oversupply and

1 overprescription of opioids.

2 Q. Okay. And, I mean, when you are
3 talking about marketing to physicians, what
4 marketing activities were you aware of, if any,
5 engaged in by pharmacies?

6 MR. ARBITBLIT: Object to form.

7 A. Neither the report, the National
8 Academies article, or the Kolodny article specifies
9 marketing to physicians when talking about
10 marketing.

11 Q. (BY MR. HERMAN:) But your report --

12 A. That is a separate issue.

13 Q. I mean -- okay. Well, let's just
14 talk about marketing generally. Are you redefining
15 "marketing" to mean distribution, dispensing? Are
16 you including those in marketing now?

17 I mean, I think "marketing" has a
18 pretty -- I mean, what do you mean by "marketing"?

19 MR. ARBITBLIT: Object to form.
20 Compound. Confusing. Vague.

21 A. Yeah, I am not -- what is the
22 specific question?

23 Q. (BY MR. HERMAN:) Let's start on Page
24 14, "direct marketing to physicians." Are you
25 aware of any activities by pharmacies that entail

1 direct marketing to physicians?

2 MR. ARBITBLIT: Object to the form.

3 A. Page 14 of my report?

4 Q. (BY MR. HERMAN:) Yes.

5 MR. ARBITBLIT: Object to form.

6 A. That goes back to the Hadland article
7 and the testimony I have already provided about the
8 Open Payments database.

9 Q. (BY MR. HERMAN:) Okay. So -- and
10 your testimony was you don't know one way or
11 another whether that relates to pharmacies?

12 MR. ARBITBLIT: Object to form.

13 A. We can go back and read the
14 testimony. I mean, I didn't say I don't know one
15 way or the other. What I said was that the Hadland
16 article is based on the Open Payments databases,
17 and that what is reported in the Methods section is
18 that pharmaceutical companies are in the Open
19 Payments database. I have not analyzed the Open
20 Payments database to derive what industry each
21 company that is in the Open Payments database is
22 from.

23 Q. (BY MR. HERMAN:) Okay. And then on
24 Page 33 it says, "exposure to pharmaceutical
25 marketing" -- Page 33 of your report, "exposure to

1 pharmaceutical marketing and sales efforts" --
2 or -- it says, "association between exposure to
3 pharmaceutical marketing and sales efforts with
4 changes in prescribing." And do you know --

5 A. I mean, pharmacies are involved in
6 opioid sales, are they not?

7 MR. ARBITBLIT: Wait for a question.

8 A. Sorry.

9 Q. (BY MR. HERMAN:) Well, I think it is
10 talking about sales efforts with changing in
11 prescriber behaviors, and that is what the studies
12 you cite are about. So are you aware of
13 pharmaceutical marketing efforts and sales efforts
14 that change prescriber behavior that pharmacies
15 engaged in?

16 MR. ARBITBLIT: Object to form.

17 A. Again, this -- I think the articles
18 that are cited there refer to the Open Payments
19 database. So my testimony would be the same, that
20 the Open Payments database, from my understanding,
21 includes pharmaceutical companies, and I am not --
22 I don't know all of the companies that are included
23 in the database.

24 Q. (BY MR. HERMAN:) Okay. So sitting
25 here today, you couldn't give an opinion one way or

1 another whether this relates to your opinions about
2 marketing on Page 14 and Page 33 of your report
3 relate to pharmacies?

4 A. I am not offering opinions about
5 specific marketing activities of specific
6 pharmacies or pharmacy chains. I am offering
7 opinions about these articles in generality, in
8 aggregate.

9 Q. Do you know if CVS engaged in any
10 direct marketing activities to prescribers?

11 MR. ARBITBLIT: Objection. Vague.

12 A. Again, I am not offering opinions
13 about CVS's marketing activities in --
14 specifically.

15 Q. (BY MR. HERMAN:) Okay. So that same
16 answer would apply to Walmart, Walgreens, Rite Aid
17 and Giant Eagle?

18 A. Yes.

19 MR. HERMAN: Okay. We have been
20 going about an hour. Do people want to take a
21 break?

22 A. Sure.

23 MR. ARBITBLIT: All right. We will
24 break for like five minutes.

25 THE VIDEOGRAPHER: Stand by. We are